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REMARKS

Claims 1-19 are pending in the application. In response the office action, applicants have amended claims 14-19. Claims 1-19 remain pending for reconsideration.

Claims 15-19 are rejected under 35 U.S.C. § 112, second paragraph. Applicants have amended claims 14-19 editorially to address the noted informality. No new matter has been added. Applicants submit that claims 15-19 are now in proper form.

Claims 1-4, 6-9, and 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Parady (U.S. Patent No. 5,933,627) in further view of Bondi (U.S. Patent No. 5,881,277). Applicants respectfully traverse this rejection for the following reasons.

The office action asserts that Parady teaches an execution module coupled to a front end module. However, this is incorrect. The relied upon decode unit 14 is not coupled to the relied upon execution unit 41 (see Fig. 3 of Parady).

The office admits that Parady does not teach the recited state module, and instead relies on a conflation of components including various register files 48, 50, and 110 as corresponding to the recited state module coupled to the front end module. However, none of the relied upon components 48, 50, or 110 are coupled to the relied upon decode unit 14 (see Fig. 3 of Parady).

The office action further admits that Parady fails to teach or suggest the recited switch logic module that detects a mispredicted branch in a software thread and schedules a switch to another software thread during a latency of said mispredicted branch. In fact, Parady does not even mention and is not concerned with the problem of latency of mispredicted branches. Accordingly, there does not appear to be motivation to modify Parady to address this problem.

Applicants note that the Examiner's reference to 'long-latency event' in paragraph 9d of the action relates to the alleged teaching of Parady and not to any language of the present claims.

In any event, the office action relies on Brondi for this missing teaching. However, the office action merely cites a portion of Brondi which identifies a problem in connection with a pipelined processor (col. 1, lines 47-64). The office action fails to identify any portion of Brondi which allegedly teaches or suggests modifying Parady in any way which might bear on the claims.

In fact, the technique discussed in Brondi for addressing the misprediction problem in a pipelined processor does not appear to have any bearing on the present claims. Applicants

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submit that if the Examiner more closely reviewed Bondi, he would discover that Bondi is directed to reducing the latency time of a mispredicted branch, and not to switching to another thread during such latency (e.g. see col. 16, lines 13-17).

In view of the structural elements missing from Parady, the lack of motivation to combine the references, and the missing teachings from both references, the office action fails to establish a prima facie case of obviousness of claim 1, and claim 1 is patentable over the cited combination of references. Claims 2-7 depend either directly or indirectly from claim 1 and are therefore also patentable.

Applicants strenuously object to the Examiner's characterization of claims 8 and 14 in paragraph 12 of the action as being 'nearly identical' or 'encompassing the same scope' as compared to claim 1. Applicants further objects to similar statements made with respect to other claims throughout the action. Each claim stands on its own and may encompass different and / or broader scope.

In any event, the Examiner has admitted that Parady does not teach the recited claim elements and does not identify any portion of Brondi which allegedly teaches or suggests modifying Parady in any way which might bear on the claims. The only portion of Brondi discussed in the action (col. 1, lines 47-64) merely identifies a problem with misprediction in a pipelined processor. Accordingly, the office action fails to establish a prima facie case of obviousness with respect to claims 8 and 14, and claims 8 and 14 are patentable over the cited combination of references. The respective dependent claims 9-13 and 15-19 are likewise patentable.

Claims 5, 10-13 and 16-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Parady, in further view of Brondi, and in further view of Borkenhagen (U.S. Patent No. 6,567,839). Applicants respectfully traverse this rejection for the following reasons.

Borkenhagen, which is relied upon for various teachings admitted to be missing from Parady and Brondi, fails to make up for the above noted deficiencies with the other references. Accordingly, the office action fails to establish a prima facie case of obviousness with respect to the rejected claims.

In view of the deficiencies in the references with respect to the independent claims, the dependent claims are not argued separately at this time. However, applicants note that the action

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contains many statements of what one skilled in the art might "recognize," without any reference to a teaching in the cited documents. If the rejections are maintained, applicants respectfully request that the Examiner identify a corresponding teaching in the references.

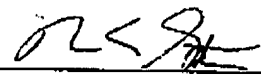
Moreover, if any of the rejections are maintained, or if new rejections are made, with respect to both the independent and dependent claims, applicants respectfully request a new non-final action in compliance with 37 C.F.R. § 104 (c)(2). In particular applicants respectfully request that any further rejections sufficiently designate the particular part of each reference relied upon for disclosing each claim recitation, so that a full and fair analysis and response may be made.

In view of the foregoing, favorable reconsideration and withdrawal of the rejections is respectfully requested. Early notification of the same is earnestly solicited. If the rejections are to be maintained, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below to arrange a personal interview.

Respectfully submitted,

May 3, 2004
Date

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office addressed to: Commissioner for Patents, Washington, DC 20231 on the date shown below.


Serita C. Evans

Date 5/3/04